

ABSTRACT OF THE DISCLOSURE

A heat activated power source is disclosed that includes an anode element, a cathode element, and an electrolyte element, all of which are stacked in an electrically conductive shell so as to form a unitary body therein. The electrolyte is of a type that is ionically passive below a certain temperature and that is ionically active above that temperature. One of the anode and cathode elements serves the additional purpose of providing for heat amplification, and thus amplifies an otherwise too small heat energy signal so that it is enough for activating the electrolyte. The power source is particularly suitable for use in pyro-electric detonator applications, where it facilitates highly accurate delay times that are virtually independent of the delay time duration. The power source is suitable for large scale manufacturing, with maintained time delay performance and without need for special manufacturing equipment-or for inert gas conditions.